N431 Care Plan #2

Lakeview College of Nursing

Name Berich Mpoy

Demographics (3 points)

Date of Admission	Client Initials	Age	Gender
03/30/23	DS	51	M
Race/Ethnicity	**Occupation**	**Marital Status**	**Allergies**
Caucasian	Unemployed	Divorced	Codeine, Lisinopril, Naproxen, Tramadol
Code Status	**Height**	**Weight**	
Full code	175.26cm	97.0 kg	

Medical History (5 Points)

Past Medical History: chronic obstructive pulmonary disease, hypertension, peripheral artery disease, hypertension, gastroesophageal reflux disease, tonsils, depression, atrial fibrillation, anemia, arthritis, gall bladder, deep vein thrombosis, hyperlipidemia, constipation, ankylosing spondylitis, benign prostatic hyperplasia, rhinitis.

Past Surgical History: gastro reflux operation, laparoscopic cholecystectomy, tonsillectomy

Family History: Mother: breast and colon cancer, diabetes mellitus, heart attack, and stroke. Father: heart attack and renal failure.

Social History (tobacco/alcohol/drugs including frequency, quantity and duration of use): Smoker: one pack per day for 10 or more years. Alcohol use: two to three beers per week for 10 or more years. Cessation of both smoking and alcohol use last year.

Assistive Devices: Wheelchair, and Walker.

Living Situation: This patient lives at home with his girlfriend, daughter, and two sons. He also lives with the son's girlfriend.

Education Level: High school degree

Admission Assessment

Chief Complaint (2 points): Unilateral weakness of the left extremities

History of Present Illness – OLD CARTS (10 points): The patient started experiencing symptoms 5 weeks ago. The patient was experiencing weakness in the lower and upper extremities. The patient called his doctor. The doctor did not prescribe the patient any medication but told the patient to go to the emergency room, but the patient was too busy to go. Upon arriving, the patient stated the weakness was constant and lasted 5 to 6 weeks. The patient also complained of pain all over the body upon arriving. The patient has no relieving or aggravating factors. The patient did not receive any treatment before arriving at the emergency room.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Chronic obstructive pulmonary disease

Secondary Diagnosis (if applicable): N/A

Pathophysiology of the Disease, APA format (20 points):

Chronic obstructive pulmonary disease is a chronic inflammatory lung disease that causes damage to the lungs and their structures, leading to obstructed airflow from the lungs. It is a combination of lung diseases, such as bronchitis and emphysema. The chronic obstructive pulmonary disease occurs when there is irritation in the lungs and the structures of the lungs which activates the inflammatory response. The inflammatory response recruits neutrophils and macrophages and releases multiple inflammatory mediators Agarwal (2022). As these neutrophils and inflammatory mediators try to destroy the irritants, they cause damage to the air sac, known as the alveoli. Oxidants and proteases, which are part of the inflammatory response, destroy elastin, leading to the loss of elastic recoil and airway impairment (Agarwal, 2022). Impaired gas exchange is also due to the inflammatory response and airway obstruction. The destruction of the airway and alveoli sacs causes decreased forced expiratory volume, reduction

in ventilation, physiological dead space in sacs, and pulmonary hypertension due to hypoxia. An exacerbation of chronic pulmonary disease like the one seen in this patient is caused by pathogens such as bacteria, viruses, and irritants. When these pathogens invade the respiratory system, inflammation increases, and airway flow is obstructed due to the inflammatory response. Because of these pathogens, the inflammatory response continues recruiting white blood cells and mediators, causing more damage to the lungs and their structures.

Chronic obstructive pulmonary disease is a chronic inflammatory lung disease that obstructs the airway and destroys the air sacs. Patients with chronic obstructive pulmonary disease present signs and symptoms, including shortness of breath, difficulty breathing, cough, digital clubbing, cyanosis, pursed lip breathing, wheezing, and excessive mucus production (Capriotti, 2020). Exposure to irritants increases the risk of developing severely impaired gas exchange which presents with severe shortness of breath. When the patient arrived at the hospital, he presented with shortness of breath, as mentioned above. The patient presents with shortness of breath and cough when he walks for a very short distance, most likely due to impaired gas exchange and airway obstruction.

Chronic obstructive pulmonary disease is diagnosed using multiple laboratory tests. Providers use walk tests, laboratory testing, and radiographic imaging, but the diagnosis of chronic obstructive pulmonary disease is confirmed by spirometry Agarwal (2022). A spirometry test is performed to assess lung function before any medication is administered and after the medications are administered to confirm the diagnosis of COPD. This parametric test measures the patient's forced expiratory volume and forced vital capacity Agarwal (2022). The six-minute

walk test assesses the submaximal functional capacity of the patient, laboratory testing assesses for infection, and radiographic imaging visualizes physical damage to the lungs. The provider used a spirometry test and a complete blood count panel to confirm this patient's chronic obstructive pulmonary disease. The patient's signs and symptoms and laboratory test confirmed his chronic obstructive pulmonary disease diagnosis.

The first treatment goal is to control the signs and symptoms of chronic obstructive pulmonary disease Agarwal (2022). Patients are recommended to seize smoking and avoid areas that can trigger an exacerbation of the disease. If an infection occurs, patients have been prescribed bronchodilators, inhaled corticosteroids, systemic glucocorticoids, and antibiotics. Bronchodilators work by relaxing the smooth muscles in the airway, increasing airflow and gas exchange. Bronchodilators decrease the signs and symptoms of chronic obstructive pulmonary disease, such as shortness of breath, wheezing, and many others. Inhaled corticosteroids that are prescribed reduce inflammation caused by the inflammatory response, and antibiotics destroy lung infections, reducing the accumulation of white blood cells and inflammatory mediators in the lungs Agarwal (2022). This patient was prescribed all the above medications to treat every aspect of chronic obstructive pulmonary disease. Antibiotics were prescribed to the patient to treat the present infection, as evidenced by the patient's complete blood count panel. Bronchodilators and corticosteroids were provided to the patient to relax the airway and reduce inflammation of the airway. These medications reduced shortness of breath which the patient was experiencing when he first arrived at the hospital.

Pathophysiology References (2) (APA):

Agarwal, A. K., Raja, A., & Brown, B. D. (2022). Chronic Obstructive Pulmonary Disease. In *StatPearls*. StatPearls Publishing.

Capriotti, T. & Frizzell, J.P. (2020). *Pathophysiology: Introductory concepts and clinical perspectives.* (2nd ed.). F.A. Davis Company.

Laboratory Data (15 points)

CBC Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab	Normal Range	Admission Value	Today's Value	Reason for Abnormal Value
RBC	4.0-5.8×10^6/mcl	4.27mcl	4.34mcl	N/A
Hgb	12.0-15.8g/dl	12.6g/dl	12.8g/dl	N/A
Hct	36.0-47.0%	35.7%	37.0%	N/A
Platelets	140-440k/mcl	232k/mcl	273k/mcl	N/A
WBC	4.0-12.0k/mcl	17.9k/mcl	9.3k/mcl	According to Capriotti (2020), inflammation in the body triggers the release of leukocytes. The inflammation can come from an injury, infection, or disease. Elevated white blood cells in this patient indicate that the patient is experiencing inflammation from chronic obstructive pulmonary disease and infection.
Neutrophils	2.4-8.4k/mcl	9.0k/mcl	N/A	The Patient is on an antibiotic for an infection. Neutrophils are elevated due to the patient's infection. According to Capriotti (2020), inflammation in the body triggers the release of leukocytes. The inflammation can come from an injury, infection, or disease.
Lymphocytes	0.8-3.7k/mcl	1.4k/mcl	N/A	N/A
Monocytes	0.3-1.1k/mcl	1.2k/mcl	N/A	Elevated monocytes due to the

				infection and inflammation in chronic obstructive pulmonary disease. Capriotti (2020) states that Monocytes are elevated due to an infection or inflammation.
Eosinophils	0.0-0.5k/mcl	0.6k/mcl	N/A	Eosinophils are also elevated when an infection or inflammation is present (Capriotti, 2020).
Bands	0.0-10.0%	N/A	N/A	N/A

Chemistry Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab	Normal Range	Admission Value	Today's Value	Reason For Abnormal
Na-	134-144mmol/L	133mmol/l	137mmol/l	N/A
K+	3.5-5.1mmol/L	4.4mmo/l	5.4mmol/l	High potassium due to the patient history of BPH, renal insufficiency, and the patient is on nephrotoxic antibiotics. Nephrotoxic medications and renal insufficiency can alter the glomerular filtration rate (Capriotti, 2020).
Cl-	98-107mmol/L	103mmol/l	111mmol/l	Elevated chloride level due to renal insufficiency, BPH, and antibiotics the patient is on. Renal insufficiency alters the glomerular filtration rate, which can lead to elevated electrolytes (Capriotti, 2020).
CO2	21-31mmol/L	23mmol/l	21mmol/l	N/A
Glucose	70-99mg/dL	81mg/dl	86mg/dl	N/A
BUN	7-25 mg/dL	21mg/dl	28mg/dl	Elevated BUN level due to the renal history of insufficiency, BPH, and antibiotics the patient is on. Renal insufficiency alters the glomerular filtration rate, which can lead to elevated electrolytes (Capriotti, 2020).

Creatinine	0.50-1.20mg/dL	1.25mg/dl	1.49mg/dl	Elevated creatinine level due to a history of renal insufficiency, BPH, and antibiotics the patient is on. Renal insufficiency alters the glomerular filtration rate, which can lead to elevated electrolytes (Capriotti, 2020).
Albumin	3.5-5.7g/dL	N/A	3.8g/dl	N/A
Calcium	8.6-10.3mg/dL	8.7mg/dl	8.6mg/dl	N/A
Mag	1.6-2.6mg/dL	1.8mg/dl	1.4mg/dl	Decreased magnesium level, explained by the patient's medications. The patient takes diuretics, which can cause electrolyte imbalances (Capriotti, 2020).
Phosphate	2.4-4.5unit/L	N/A	N/A	N/A
Bilirubin	0.3-1.0mg/dL	0.8mg/dl	N/A	N/A
Alk Phos	34-104units/L	N/A	103units/l	N/A
AST	13-39units/l	N/A	22unit/l	N/A
ALT	7-52unit/l	N/A	20unit/l	N/A
Amylase	29-103 unit/l	N/A	N/A	N/A
Lipase	11-82unit/l	N/A	N/A	N/A
Lactic Acid	<2.5mmol/l	N/A	N/A	N/A
Troponin	0-0.04mg/dl	N/A	N/A	N/A
CK-MB	5-25ug/l	N/A	N/A	N/A
Total CK	22-198 u/l	N/A	N/A	N/A

Other Tests Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab Test	Normal Range	Value on Admission	Today's Value	Reason for Abnormal
INR	0.86- 1.4	N/A	N/A	N/A
PT	11.9- 15	N/A	N/A	N/A
PTT	22.6 - 35.3	N/A	N/A	N/A
D-Dimer	0.00 - 0.62g/l	N/A	N/A	N/A
BNP	0-100pg/ml	N/A	N/A	N/A
HDL	23-92mg/dl	N/A	N/A	N/A
LDL	75 -193mg/dl	N/A	N/A	N/A
Cholesterol	<199mg/dl	N/A	N/A	N/A
Triglycerides	<150mg/dl	N/A	N/A	N/A
Hgb A1c	<5.7%	N/A	N/A	N/A
TSH	0. 45 - 5.33uU/ml	N/A	N/A	N/A

Urinalysis Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab Test	Normal Range	Value on Admission	Today's Value	Reason for Abnormal
Color & Clarity	yellow, clear	Yellow, clear		
pH	5.0-9.0	5.5		
Specific Gravity	1.003-1.030	1.033		High urine specific gravity is most likely caused by dehydration. Dehydration leads to elevated urine specific gravity (Capriotti, 2020).
Glucose	Negative	Negative		
Protein	Negative	Negative		

Ketones	Negative	Negative		
WBC	0.0-0.5	N/A		
RBC	0.0-3.0	N/A		
Leukoesterase	Negative	Negative		

Arterial Blood Gas Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Test	Normal Range	Value on Admission	Today's Value	Explanation of Findings
pH	7.35-7.45	N/A	N/A	N/A
PaO2	90- 100mmhg	N/A	N/A	N/A
PaCO2	35-45mEq/l	N/A	N/A	N/A
HCO3	22-26mEq/l	N/A	N/A	N/A
SaO2	95-100%	N/A	N/A	N/A

Cultures Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Test	Normal Range	Value on Admission	Today's Value	Explanation of Findings
Urine Culture	Negative	N/A	N/A	N/A
Blood Culture	Negative	N/A	N/A	N/A
Sputum Culture	Negative	N/A	N/A	N/A

Stool Culture	Negative	N/A	N/A	N/A

Lab Correlations Reference (1) (APA):

Capriotti, T. & Frizzell, J.P. (2020). *Pathophysiology: Introductory concepts and clinical perspectives.* (2nd ed.). F.A. Davis Company.

Pagana, K. D., Pagana, T. J., & Pagana, T. N. (2018). *Mosby's diagnostic and laboratory test reference* (6th ed.). Mosby.

Diagnostic Imaging

All Other Diagnostic Tests (5 points):

An x-ray of the hips and pelvis was performed to visualize the cause of the patient's pain. The patient complained of pain all over the body, including pain in the hips and groin. The patient's x-ray showed no acute fractures, malalignment, and normal soft tissues.

MRI of the brain without contrast on 3/28/23. MRI was Conducted to visualize the cause of the patient's left-sided weakness. The findings of the MRI are mild parenchymal volume loss and mild periventricular cerebral white matter, pontine gliosis related to chronic macrovascular changes. Also, small old puncture central pontine infarct with slight encephalomalacia and extra-axial fluid collection hemorrhage, mass diffusion, or acute infarct.

MRI of the cervical spine without contrast 3/28/23. The MRI visualized degenerative spondylosis at L3-L4 level with posterior disk osteophyte complex causing moderate to severe spinal canal stenosis. MRI showed a decreased signal in the cord, consistent with cord edema and confusion. The cervical spine is intact, and no other evidence of stenosis exists.

MRI of the thoracic spine without contrast. Conduct due to weakness in all extremities. The MRI showed no evidence of thoracic spine fracture or severe spinal canal stenosis.

Diagnostic Test Correlation (5 points):

X-rays of the hip and pelvis are used to visualize fractures, dislocations, bone lesions, degenerative diseases, hip dysplasia, joint dislocations, and trauma (Capriotti, 2020). The X-ray Brain MRI produces very clear images of the brain. The entire process is painless. The MRI also produces images of the structures of the head, facial bones, nerves, inflammation, and blood vessels (Capriotti, 2020). MRI is mostly used to visualize tumors.

Spine cervical MRI without contrast visualizes inflammation, stenosis, and strength of the signal in the cord. The MRI can detect problems with the spinal cord, nerves, and disks (Capriotti, 2020). MRIs help providers understand the signs and symptoms by identifying the problem.

Thoracic spinal MRI visualizes and produces images of the vertebrae, soft tissues, fractures, improper spine curvature, inflammation, infection, herniated discs, spinal cord damage, and tumors (Capriotti, 2020).

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Diagnostic Test Reference (1) (APA):

Capriotti, T. & Frizzell, J.P. (2020). *Pathophysiology: Introductory concepts and clinical perspectives.* (2nd ed.). F.A. Davis Company.

Current Medications (10 points, 1 point per completed med)
10 <u>different</u> medications must be completed

Home Medications (5 required)

Brand/ Generic	Carvedilol/ Coreg	Celecoxib/ Celebrex	Fluticasone/ Flovent HFA	Losartan/ Cozaar	Tadalafil/ Adcirca

Dose	1 tablet	1 capsule	1 spray	1 tablet	1 tablet
Frequency	Twice daily	Once daily	Twice daily	Once daily	Once daily
Route	Oral	Oral	Nasal	Oral	Oral
Classification	Pharmacologic Class: Nonselective beta blocker and alpha-1 blocker Therapeutic class: Antihypertensive, heart failure treatment adjunct.	Pharmacologic class: NSAID Therapeutic class: Analgesic, anti-inflammatory, antirheumatic.	Pharmacologic class: corticosteroid Therapeutic class: antiasthmatic, anti-inflammatory.	Pharmacologic class: angiotensin 2 receptor blocker (ARB) Therapeutic class: Antihypertensive	Pharmcologic class: phosphodiesterase-5 (PDE5) inhibitor
Mechanism of Action	This medication selectively blocks alpha and beta receptors, causing vasodilation and decreased PVR; negative inotropic and chronotropic properties, thereby decreasing cardiac output, blood pressure and preventing tachycardia (Jones, 2020).	This medication inhibits the transformation of arachidonic acid to prostaglandin precursors. Therefore, it has antipyretic, analgesic and anti-inflammatory properties (Jones, 2020).	This medication is an anti-inflammatory and vasoconstrictor that decrease inflammation by inhibiting mast cells, macrophages, and mediators such as leukotrienes (Jones, 2020).	This medication blocks the angiotensin II receptor, thus inhibiting vasoconstriction & sodium and fluid retention (Jones, 2020).	This medication increases cGMP levels by inhibiting PDE5 on an enzyme responsible for the breakdown of cGMP (Jones, 2020).
Reason Client Taking	Taking for Hypertension	Taking for ankylosing	Taking for rhinitis	Taking for hypertensio	Taking for benign

		spondylitis		n.	prostate hyperplasia
Contraindications (2)	Contraindicated in patients with hypersensitivity, the medication and it's components (Jones, 2020). Contraindicated in patients with bradycardia, hypotension, bronchospasm, and heart blocks (Jones, 2020).	Contraindicate in GI bleeds, peptic ulcers, renal disease, and anemia patients (Jones, 2020). Contraindicated in patients with hypersensitivity to the medication (Jones, 2020).	Contraindicated in the primary treatment of status asthmatics (Jones, 2020). Use caution in patients who are being transferred from systemic corticosteroids to Flovent because deaths due to adrenal insufficiency have occurred during after transfer (Jones, 2020). Should not be give as rapid relief of bronchospasm (not a bronchodilator) (Jones, 2020).	Hypersensitivity to medication and its components (Jones, 2020). Contraindicated in patients with impaired renal function, hypovolemia, and hyponatremia (Jones, 2020).	Hypersensitivity to medication and its components (Jones, 2020). Contraindicated with hepatic impairment, renal impairment, retinol disorders, and heart failure (Jones, 2020).
Side Effects/Adverse Reactions (2)	Dizziness, fatigue, weakness, anxiety, depression, insomnia,	Abdominal pain, dyspepsia, headache, nausea, vomiting,	Pharyngitis, upper respiratory infection, nasal congestion,	Fatigue, hypoglycemia, hypotension, dizziness,	Hypotension, nasal congestion, peripheral edema, flushing,

	mental status changes, blurred vision, mental status changes, and nervousness.	peripheral edema, and increased risk of cardiovascular disease.		headache, and angioedema.	back pain, and myalgia
Nursing Considerations (2)	Carvedilol decreases beta-agonist effects, and use with digoxin or calcium channel blockers may increase bradycardia (Jones, 2020).	Assess patient for allergy to sulfonamides, aspirin, or NSAIDs Patients with these allergies should not receive celecoxib (Jones, 2020). Assess patient for skin rash frequently during therapy. Discontinue at the first sign of rash; it may life-threatening. Stevens-Johnson syndrome may develop	Observe for systemic effects of corticosteroids, and monitor patients for inadequate adrenal resp; benefits are best when doses are daily (Jones, 2020) Decrease medication dose to lowest effective dose after the desired effect; decrease dose at 2-4 week intervals (Jones,2020)	Monitor the patient for adverse reactions, weight, fluid, and electrolyte status (Jones, 2020). Observe the patient's tolerance of the drug, and monitor the drug's therapeutic effects (Jones, 2020).	Use this medication caustiosly in patients with left ventricular outflow obstruction, such as aortic stenosis (Jones, 2020). Also use cautiously in patients with idiopathic hypertrophic subaortic stenosis, and those with severely impaired autonomic control of blood pressure because these conditions increase sensitivity to vasodilators(Jones, 2020).
Key Nursing Assessment(s)/ Lab(s) Prior to Administratio	Evaluate the patient's blood pressure and heart rate	Obtain the patient's complete blood count panel because	Complete respiratory assessment before administering	Obtain the patient's blood pressure and pulse	Monitor the patient's blood pressure and heart rate

n	prior.	celecoxib's anti-inflammatory and antipyretic actions may mask signs and symptoms, such as fever and pain (Jones, 2020).	medication, evaluate the patient's lung sounds and pulmonary function (Jones, 2020).	rate (Jones, 2020).	and rhythm before and after therapy(Jones, 2020).
Client Teaching Needs (2)	Educate the patient that abrupt withdrawal may precipitate life-threatening arrhythmias, hypertension, or myocardial ischemia (Jones, 2020). Educate the patient to notify the health care professional if there is a slow pulse, difficulty breathing, wheezing, cold hands, and feet, or dizziness (Jones, 2020).	Educate the patient to notify health care professional promptly if signs or symptoms of GI toxicity (abdominal pain, black stools), skin rash, unexplained Weight gain, edema, or chest pain occurs (Jones, 2020). Do not break, crush, chew, or dissolve caps. Caps can be opened into applesauce or soft food but must be ingested immediately with water (Jones,	Educate the patient not to take medication for rapid relief of bronchospasm (not a bronchodilator) (Jones, 2020). Educate the patient to contact a physician if the side effects are severe or persistent (Jones, 2020).	Notify the provider of symptoms of hypotension such as dizziness, and fainting (Jones, 2020). Educate the patient to rise slowly to sitting or standing position to minimize orthostatic hypotension (Jones, 2020).	Educate the patient not to take tadalafil if he takes any form of organic nitrate continuously or intermittently, because profound hypotension and death could result (Jones, 2020). Educate the patient to seek immediate medical attention if he experiences hearing loss that may accompany dizziness, tinnitus or a sudden loss of vision in

		2020).			one or both eyes (Jones, 2020).

Hospital Medications (5 required)

Brand/ Generic	Atorvastatin/ Lipitor	Cefepime/ Maxipime	Enoxaparin/ Lovenox	Vancomycin/ Vancocin	Tamsulosin/ Flomax
Dose	40mg	2g	40mg	1g=200ml	0.4mg=1cap
Frequency	Daily	Every 8 hour	Daily	Every 12 hour	At bedtime
Route	oral	IV piggyback	subcutaneous	IV piggyback	Oral
Classification	Pharmacological class: HMG-CoA reductase inhibitor (statin). Therapeutic class: Antihyperlipidemic	Pharmacologic class: Fourth-generation cephalosporin Therapeutic class: Antibiotic	Pharmacological class; Lower molecular weight heparin. Therapeutic class; anticoagulant.	Pharmacologic class: Glycopeptide Therapeutic class: Antiobiotic.	Pharmacologic class: Alpha adrenergic antagonist Therapeutic class: Benign prostatic hyperplasia (BPH) agent.
Mechanism of Action	"Inhibits cholesterol synthesis in the liver by blocking the enzyme needed to convert hydroxymethyl glutaryl-CoA (HMG-CoA) to mevalonate, a cholesterol precursor. When cholesterol synthesis is blocked, the	This medication binds to bacterial cell wall membranes, inhibits cell wall synthesis, bactericidal (Jones, 2020).	Enoxaparin is a coagulation inhibitor. It rapidly binds with antithrombin 3 and inactivates clotting factors (Jones, 2020).	Inhibits cell wall synthesis by binding to acyl-d-alanyl-alanine to inhibit peptidoglycan polymerization. This causes cell lysis (Jones, 2020).	Selective α-adrenergic blocking agent for receptors found in the prostate. Blockage of prostate α-adrenergic receptors relax the prostate gland and bladder neck and result in increased urinary flow and a reduction

	liver also increases the breakdown of LDL cholesterol" (Jones, 2020).				in the symptoms of BPH
Reason Client Taking	The patient is taking this medication because of his history of hyperlipidemia	The patient is on this medication for a bacterial infection.	The patient is taking this medication to prevent clotting.	The patient is on this medication for a bacterial infection.	To treat benign prostatic hyperplasia (BPH) in the patient.
Contraindications (2)	This medication is contraindicated in patients with active hepatic disease or unexplained or persistent elevated liver enzymes. This medication is contraindicated in patients with active hepatic disease or unexplained or persistent elevated liver enzymes. This medication is also contraindicated in patients with hypersensitivity to the medication or its components (Jones, 2020). This medication is also	This medication is contraindicated in patients with anaphylactic reactions to penicillin's, and hypersensitivity to cephalosporin (Jones, 2020). Cautions in patients with renal impairment, and a history of seizure disorder (Jones, 2020).	This medication is contraindicated in patients with active major bleeding or who have a history of immune-mediated heparin-induced thrombocytopenia (Jones, 2020). Known hypersensitivity to the medication or it's components (Jones, 2020).	Known hypersensitivity to vancomycin (Jones, 2020). Previous hearing loss, concurrent or sequential use of other ototoxic or nephrotoxic agents, IM administration (Jones, 2020).	Contraindicated in patients with hypersensitivity to medication (Jones, 2020). Contraindicated in patients with low blood pressure, medication can cause orthostatic hypotension (Jones, 2020).

	contraindicated in patients with hypersensitivity to the medication or its components (Jones, 2020).				
Side Effects/Adverse Reactions (2)	Anxiety, confusion, cognitive impairment, dysuria, nocturia, cough, and dyspnea come from blurred vision, abnormal thyroid function, and elevated glycosylated hemoglobin levels.	Thrush, mild diarrhea, and mild abdominal cramping.	Confusion, bleeding, bruising, and spinal hematoma.	Ototoxicity, hypotension, nausea, vomiting, nephrotoxicity, phlebitis, chills, fever, and red man syndrome.	Headaches, dizziness, rhinitis, infection, abnormal ejaculation, and diarrhea
Nursing Considerations (2)	Use medication cautiously in patients with hepatic or renal impairment and in elderly patients (Jones, 2020). Monitor the patient's bilirubin levels and serum creatinine levels periodically for abnormal elevations (Jones, 2020).	Use medication cautiously in patients with hepatic or renal impairment (Jones, 2020). Use cautiously in patients with a history of seizures (Jones, 2020).	This medication should be used cautiously in patients with diabetic retinopathy, hepatic or renal impairment, GI hemorrhaging, ulceration, and uncontrolled hypertension (Jones, 2020). Monitor complete blood count panel and platelet count (Jones, 2020).	Assess for hearing loss and Monitor vancomycin levels (Jones, 2020). Monitor infusion site for swelling, inflammation, and kidney function tests (Jones, 2020).	Patients should be tested initially to rule out prostate carcinoma and confirm the diagnosis of BPH (Jones, 2020). Orthostatic hypotension may occur during therapy, therefore patients should be warned about possible syncope and dizziness (Jones, 2020).
Key Nursing	Monitor liver	Obtain CBC &	Before	Obtain baseline	Assess the

Assessment(s)/ Lab(s) Prior to Administration	enzymes before medication therapy starts and as indicated during therapy (Jones, 2020). Monitor renal labs before administering medication (Jones, 2020).	renal function tests. Evaluate if the patient is allergic or hypersensitive to the medication (Jones, 2020).	administering enoxaparin, assess for signs and symptoms of bleeding or hemorrhaging (Jones, 2020). Review patient's complete blood panel and platelet count (Jones, 2020).	for hearing test and culture sensitivity labs (Jones, 2020). Obtain baseline for complete blood count and BUN (Jones, 2020).	patient's blood pressure because this medication causes orthostatic hypotension (Jones, 2020).
Client Teaching Needs (2)	Educate the patient to notify the provider about muscle pain, tenderness, weakness, and other evidence of myopathy (Jones, 2020). Educate the patient to take drugs at bedtime. (Jones, 2020).	The nurse can advise the patient that this is used for respiratory infections, otitis media, bone/joint infections, or genitourinary tract infections (Jones, 2020). Also, take the medication with food or milk (preferably with buttermilk).	Avoid activities that may increase your risk of bleeding or injury. Use extra care to prevent bleeding while shaving or brushing teeth (Jones, 2020). This medication will reduce or prevent blood clots from forming (Jones, 2020).	Instruct clients to notify the provider if changes in hearing loss develop (Jones, 2020). Report flushing, fainting, pain & swelling at the IV site (Jones, 2020).	Take dose ½ hours following the same meal every day (Jones, 2020).. If dose is missed, skip it and return to normal dosing schedule (Jones, 2020). May cause dizziness, especially when rising from the sitting position. Use caution when performing any hazardous task (Jones, 2020).

Medications Reference (1) (APA):

Jones & Bartlett Learning (2020). *Nurse's drug handbook*. (19th ed.). Jones & Bartlett Learning.

Assessment

Physical Exam (18 points) – HIGHLIGHT ALL PERTINENT ABNORMAL FINDINGS

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	The patient was alert and oriented X4 with no sign of distress. The patient is alert and oriented to person, place, and time. The patient was well-groomed. The patient's hygiene is appropriate for the current situation.
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** **Drains present: Y☐ N ☒** **Type:**	The patient's skin is moist. The patient skin temperature was warm with elastic skin turgor. No rashes or bruises were present during the patient assessment. The patient's Braden score is 21. The patient's skin was appropriate for ethnicity. The patient has multiple small open sore on the right wrist.
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	The patient's head is normal cephalic, and the neck is symmetrical, with the trachea at the midline. The carotid pulses are +3. There are no scars, depressions, or masses. The patient's hair has a normal texture and is evenly distributed. The patient's eyes are symmetrical, with no sign of exudates or hemorrhage. The eyes are perrla, and extraocular movements are intact. The eyes have no sign of nystagmus. The ears are symmetrical, with no sign of discharge and no tenderness. That tympanic membrane is normal

	in appearance, and hearing is intact. The nasal mucosa is pink and moist. The nasal septum is midline, and the nares are patent bilaterally. The patient's oral mucosa is pink and moist.. .
CARDIOVASCULAR: **Heart sounds:** **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** **Peripheral Pulses:** **Capillary refill:** **Neck Vein Distention: Y ☐ N ☐** **Edema Y ☐ N ☐** **Location of Edema:**	The patient has s1, and s2 heart sounds. Radial and pedal peripheral pulses are +3 bilaterally. Normal Sinus rhythm. The patient's capillary refill was less than 2 in the upper extremities, and the patient had no neck vein distention. Capillary refill in the lower extremities was not assessed bilaterally. The patient was a fall risk, and the fall score was 55. No edema in both lower and upper extremities bilaterally.
RESPIRATORY: **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character**	Breath sounds are clear anterior and posterior bilateral. Respirations are regular. Regular breathing pattern. Breath sounds are slightly diminished in all the lobes. Respirations are 18 per min. No accessory muscle use.
GASTROINTESTINAL: **Diet at home:** **Current Diet** **Height:** **Weight:** **Auscultation Bowel sounds:** **Last BM:** **Palpation: Pain, Mass etc.:** **Inspection:** **Distention:** **Incisions:** **Scars:** **Drains:** **Wounds:** **Ostomy: Y ☐ N ☐** **Nasogastric: Y ☐ N ☐** **Size:** **Feeding tubes/PEG tube Y ☐ N ☐** **Type:**	 Regular home diet. Heart healthy diet. 175.26cm 97.0kg hyperactive bowel sounds in all four quadrants. The last bowel movement was four to five days ago. Upon palpation, the patient had no pain or masses present. No distention of the abdomen No incisions are present. No scars are present. No drains are present. No wounds are present. The patient has No Ostomy. No Nasogastric tube in place. No Feeding tube was present.
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒**	 Yellow Clear 200ml The patient stated no pain with urination. No dialysis in place

Inspection of genitals: **Catheter: Y ☐ N ☒** **Type:** **Size:**	No catheter in place.
MUSCULOSKELETAL: **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☒ N ☐** **Fall Risk: Y ☒ N☐** **Fall Score: 54** **Activity/Mobility Status:** **Independent (up ad lib) ☐** **Needs assistance with equipment ☐** **Needs support to stand and walk☐**	Alert and oriented times 4 to place, time, and person. Nail beds normal, no sign of clubbing. Active and passive range of motion. Walker and wheelchair. The patient has 5+ strength in both upper and lower extremities on the left side. The patient has 4+ strength in both upper and lower extremities on the right side. The patient requires partial assistance activities of daily living. The patient fall score is 54. Full range of motion in all extremities. The patient requires assistance bending lower extremities. The patient has an active and passive range of motion in all extremities. The patient utilizes a walker and wheelchair to get around with little assistance when using a walker. He needs assistance with equipment and support to stand and walk.
NEUROLOGICAL: **MAEW: Y ☐ N☐** **PERLA: Y ☐ N☐** **Strength Equal: Y ☐ N ☒ if no -** **Legs ☐ Arms ☐ Both ☒** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	The patient is oriented to person, place, situation, and time. The patient's pupils are equal, reactive to light, and accommodated. The patient has 5+ strength in both upper and lower extremities on the right side. The patient has 4+ strength in both upper and lower extremities on the left side. The patient can follow commands, and the patient's memory is intact. The patient's speech was soft and clear. The patient is awake and answering questions appropriately. Alert and oriented times 4. Sensory is intact.
PSYCHOSOCIAL/CULTURAL: **Coping method(s):** **Developmental level:** **Religion & what it means to pt.:** **Personal/Family Data (Think about home environment, family structure, and available family support):**	The patient's coping method is watching tv, spending time with their girlfriend, and spending time with his grandson. High school graduate The patient does not participate in religion. Religion means nothing to the patient. He does not believe in religion. The patient lives with his girlfriend, two sons, and the sons' girlfriends.

Vital Signs, 2 sets (5 points) – HIGHLIGHT ALL ABNORMAL VITAL SIGNS

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
07:52	71	134/86	16	36.9	95 on 2L O2
11:00	70	105/54	18	36.0	92 on 2L O2

Vital Sign Trends: Morning vital signs were within normal range except for the blood pressure, which was slightly elevated due to pain. After the patient received his prescribed pain medication, second vital signs were taken at 11:00. The patient's vital signs were all within the normal range, including his blood pressure.

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
08:59	Numerical	All over the body	8	Constant aching pain	The patient was prescribed narcotics and Tylenol
11:00	Numerical	All over the body	8	Constant aching pain	N/A

IV Assessment (2 Points)

IV Assessment	Fluid Type/Rate or Saline Lock
Size of IV:	20 gauge
Location of IV:	Right peripheral
Date on IV:	03/30/23
Patency of IV:	Patent
Signs of erythema, drainage, etc.:	No sign of erythema, or drainage present.

IV dressing assessment:	Dry and clean dressing.

Intake and Output (2 points)

Intake (in mL)	**Output (in mL)**
N/A	Incontinent of urine times one

Nursing Care

Summary of Care (2 points)

Overview of care: The student arrived at the patient's room around 730. The student waited outside for the nurse. When the nurse arrived, she gave the student a report on both patients. The student took both patients' vital signs around 7:52. The student and nurse completed a pain assessment on the patient. The patient complained of aching pain all over his body. The patient stated that on a numerical scale of 1/10, his pain is an 8. The student and instructor provided the patient with his daily medications. Around 11:00, the student took both patients' vital signs again, which were within normal range. The student also completed a full head-to-toe assessment of the patient. The patient complained of pain equal to 8 on a numerical scale of 1/10, even after receiving prescribed pain medications. The nurse was given a report about the patients before the student left.

Procedures/testing done: No procedures or testing were done during the students' clinical hours.

Complaints/Issues: The patient complained of pain all over his body, rating the pain 8 on the numerical pain scale of 1/10. The patient was provided with prescribed pain medications but received no relief. The nurse received the report.

Vital signs (stable/unstable): When the students took the patient's first set of vital signs, all vital signs were within normal range. The patient's blood pressure was slightly elevated. The second set of vital signs taken around 11:00 were all within normal range.

Tolerating diet, activity, etc.: The patient is tolerating the current diet. The patient did not need help with daily activities except transitioning from the bed to the chair. The student provided the patient with assistance transferring from the chair to the bed. The student and preceptor provided the patient with his daily prescribed medications.

Physician notifications: N/A

Future plans for the client: The patient will remain in the hospital until the patient can pass stool and his labs return to normal. The patient eventually returns home with his girlfriend, sons, and grandsons.

Discharge Planning (2 points)

Discharge location: Home

Home health needs (if applicable): N/A

Equipment needs (if applicable): N/A

Follow up plan: N/A

Education needs: Educate the patient about the importance of attending provider-ordered appointments. Educate the patient about infection prevention.

Nursing Diagnosis (15 points)
Must be NANDA approved nursing diagnosis and listed in order of priority

Nursing Diagnosis • Include full nursing diagnosis with	Rationale • Explain why the nursing diagnosis	Interventions (2 per dx)	Outcome Goal (1 per dx)	Evaluation • How did the client/family respond to the nurse's

"related to" and "as evidenced by" components • Listed in order by priority – highest priority to lowest priority pertinent to this client	was chosen			actions? • Client response, status of goals and outcomes, modifications to plan.
1. Ineffective breathing pattern related to chronic obstructive pulmonary disease as evidenced by shortness of breath.	The patient exhibited shortness of breath when walking from the chair to the bed a very short distance.	1. Educate the patient about pursed lip breathing and administer prescribed medications (Phelps, 2020). 2. Help the patient with activities of daily living as needed to conserve energy and avoid overexertion and fatigue (Phelps, 2020).	The patient carries out activities of daily living and exhibits a normal breathing pattern after administering the prescribed medication (Phelps, 2020).	The patient reports feeling rested and verbally feeling comfortable with breathing when arresting and performing activities of daily living (Phelps, 2020).
2. Acute pain related to biological injury as evidenced by reports of pain from the patient, rating pain an 8 on a scale of	The patient reported experiencing pain all over the body and rated the pain an 8 on a scale of 1/10.	1. Assess the patient's signs and symptoms of pain behavioral cues and administer pain medication as prescribed. Monitor and record the medication's effectiveness and adverse effects. Assessment allows	1. The patient reports achieving pain relief with analgesia and other measures (Phelps, 2020).	The patient reported achieving pain relief with analgesia and other medication and satisfaction with the pain management regimen (Phelps, 2020).

1/10.		for care plan modification, as needed (Phelps, 2020). 2. Use a painful chart, and record the time of medication administration and results of pain assessment every hour until the next dose to monitor the therapy's effectiveness (Phelps, 2020).		
3. Risk for falls related to weakness of the left lower and upper extremities as evidenced by difficulty walking.	The patient complained of weakness in his left lower and upper extremities.	1. Educate the patient with an unstable gait on the proper use of assistive devices such as canes, crotches, and wheelchairs (Phelps, 2020). 2. Remove anything from the environment that will increase the risk of falls, such as throw rugs, chords, and furniture blocking the patient's path to the bathroom (Phelps, 2020).	1. The patient will demonstrate proper use of assistive devices and the ability to move without falling (Phelps, 2020).	The patient and family members assist in making the changes necessary to promote fall prevention (Phelps, 2020).
4. Risk for infection related to alteration in skin integrity as evidenced by open sores on	The patient has open sores on the right wrist.	1. Educate the patient about good hand-washing techniques, factors that increase infection risk, and signs and symptoms of infection (Phelps, 2020).	1. The patient's white blood count and differential remain within normal range, and the patient does not experience	The patient Is satisfied with nursing interventions to prevent infections.

the patient's right wrist.		2 Use strict sterile technique when providing wound care to avoid spreading pathogens (Phelps, 2020).	signs and symptoms of infection.	

Other References (APA):

Phelps, L. L. (2020). *Sparks & Taylor's Nursing Diagnosis Reference Manual* (11th ed.). Wolters Kluwer.

Concept Map (20 Points):

Subjective Data

The patient stated, "I have weakness on my left side."
The patient stated, "I have pain all over my body."
The patient stated my pain is 8 to 9 on a 1/10 scale."

Objective Data

White blood cells 17.9 (4.0-12.0k/mcl)
Neutrophils 9.0k/mcl (2.4-8.4k/mcl)
Monocytes 1.2k/mcl (0.3-1.1k/mcl)
Eosinophils 0.6k/mcl (0.0-0.5k/mcl)
Al[illegible] inflammation caused by chronic obstructive pulmonary disease and infection.

Client Information

Admitted 03/30/23.
51-year-old Caucasian male.
Admitted for chronic obstructive pulmonary disease exacerbation. The patient presented with shortness of breath. The patient is alert and oriented times 4. Heart healthy diet. Fall risk. Fall score: 54.

Nursing Diagnosis/Outcomes

1. Ineffective breathing pattern related to chronic obstructive pulmonary disease as evidenced by shortness of breath.
   - The patient carries out activities of daily living and exhibits a normal breathing pattern after administration of the prescribed medication (Phelps, 2020).
2. Acute pain related to biological injury as evidenced by reports of pain from the patient, rating pain a 8 on a scale of 1/10.
   - The patient reports achieving pain relief with analgesia and other measures (Phelps, 2020).
3. Risk for falls related to weakness of the left lower and upper extremities as evidenced by difficulty walking.
   - The patient will demonstrate proper use of assistive devices and the ability to move without falling (Phelps, 2020).
4. Risk for infection related to injury as evidenced by open sores on the patient's right wrist.
   - The patient white blood count and differential remain within normal range and patient does not experience signs and symptoms of infection.

Nursing Interventions

1. Educate the patient about pursed lip breathing and administer prescribed medications (Phelps, 2020).
2. Help the patient with activities of daily living as needed to conserve energy and avoid overexertion and fatigue (Phelps, 2020).

1. Assess the patient's signs and symptoms of pain behavioral cues and administer pain medication as prescribed. Monitor and record the medication's effectiveness and adverse effects. Assessment allows for care plan modification, as needed (Phelps, 2020).

2. Use a painful chart and record the time of medication administration and results of pain assessment every hour until the next dose to monitor the therapy's effectiveness (Phelps, 2020).

1. Educate the patient with an unstable gait on the proper use of assistive devices such as canes, crotches, and wheelchairs (Phelps, 2020).

2. Remove anything from the environment that will increase the risk of falls, such as throw rugs, chords, and furniture blocking the patient's path to the bathroom (Phelps, 2020).

1. Educate the patient about good hand-washing techniques, factors that increase infection risk, and signs and symptoms of infection (Phelps, 2020).

2 Use strict sterile technique when providing wound care to avoid spreading pathogens (Phelps, 2020).